ASSESSMENT OF PERIPHERAL ARTERIAL DISEASE IN DIABETIC FOOT ULCER IN SOUTH INDIAN POPULATION: A PROSPECTIVE STUDY

INTRODUCTION

Diabetic foot ulcer(DFU) is very common yet challenging complication of diabetes worldwide. These ulcers are biologically compromised majorly by ischemia and neuropathy. Ischemia has gained recognition as a significant cause of DFU.

The association of peripheral arterial disease(PAD) largely impacts the treatment outcomes of DFU in terms of ulcer healing, lower limb amputations and mortality. The burden of PAD in DFU in South Indian population has not been assessed adequately in the recent years. A multidisciplinary approach to DFU and prompt diagnosis of ischemia will decrease the loss of limb and life.

OBJECTIVE

The objective of the study was to assess the peripheral arterial disease and associated risk factors in patients with diabetic foot ulcer.

METHODS

A total of 100 patients were evaluated in this study. The patients were subjected to detailed history and clinical examination which included distal pulse

assessment, ankle-brachial index(ABI) and duplex scan to evaluate PAD. The data was subjected to statistical analysis to find out association between parameters of interest.

RESULTS

The prevalence of PAD in DFU was found to be 36%. There is significant association of PAD with high WIFI index and longer diabetic duration(p=0.007) with mean disease duration of 10 years. Osteomyelitis is strongly associated with PAD(59%, p=0.003). PAD was associated with higher amputation rates(53.8%, p=0.003).Also higher amputation rates correlated with a high WIFI score(p=0.0001) and higher Fontaine grades. Wound culture most commonly revealed a polymicrobial isolate followed by gram negative aerobes sensitive to aminoglycosides.

CONCLUSION

Previous studies aimed to study prevalence of PAD in diabetes irrespective of foot ulcer. The present study analyzed various factors coexisting with DFU and PAD. The results conclude that peripheral arterial disease is a potential risk factor for major limb amputations.

KEYWORDS

Diabetic foot ulcer, peripheral arterial disease, osteomyelitis, amputation, ischemia, ankle brachial index, wound culture